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 NEWS  1              Web Page for STN Seminar Schedule - N. America
 NEWS  2  JAN 08  CHEMLIST enhanced with New Zealand Inventory of Chemicals
 NEWS  3  JAN 16  CA/CAplus Company Name Thesaurus enhanced and reloaded
 NEWS  4  JAN 16  IPC version 2007.01 thesaurus available on STN
 NEWS  5  JAN 16  WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
 NEWS  6  JAN 22  CA/CAplus updated with revised CAS roles
 NEWS  7  JAN 22  CA/CAplus enhanced with patent applications from India
 NEWS  8  JAN 29  PHAR reloaded with new search and display fields
 NEWS  9  JAN 29  CAS Registry Number crossover limit increased to 300,000 in
                  multiple databases
 NEWS 10  FEB 15  PATDPASPC enhanced with Drug Approval numbers
 NEWS 11  FEB 15  RUSSIAPAT enhanced with pre-1994 records
 NEWS 12  FEB 23  KOREAPAT enhanced with IPC 8 features and functionality
 NEWS 13  FEB 26  MEDLINE reloaded with enhancements
 NEWS 14  FEB 26  EMBASE enhanced with Clinical Trial Number field
 NEWS 15  FEB 26  TOXCENTER enhanced with reloaded MEDLINE
 NEWS 16  FEB 26  IFICDB/IFIPAT/IFIUDB reloaded with enhancements
 NEWS 17  FEB 26  CAS Registry Number crossover limit increased from 10,000
                  to 300,000 in multiple databases
 NEWS 18  MAR 15  WPIDS/WPIX enhanced with new FRAGHITSTR display format
 NEWS 19  MAR 16  CASREACT coverage extended
 NEWS 20  MAR 20  MARPAT now updated daily
 NEWS 21  MAR 22  LWPI reloaded
 NEWS 22  MAR 30  RDISCLOSURE reloaded with enhancements
 NEWS 23  APR 02  JICST-EPLUS removed from database clusters and STN
 NEWS 24  APR 30  GENBANK reloaded and enhanced with Genome Project ID field
 NEWS 25  APR 30  CHEMCATS enhanced with 1.2 million new records
 NEWS 26  APR 30  CA/CAplus enhanced with 1870-1889 U.S. patent records
 NEWS 27  APR 30  INPADOC replaced by INPADOCDB on STN
 NEWS 28  MAY 01  New CAS web site launched
 NEWS 29  MAY 08  CA/CAplus Indian patent publication number format defined
 NEWS 30  MAY 14  RDISCLOSURE on STN Easy enhanced with new search and display
                  fields
 NEWS 31  MAY 21  BIOSIS reloaded and enhanced with archival data
 NEWS 32  MAY 21  TOXCENTER enhanced with BIOSIS reload
 NEWS 33  MAY 21  CA/CAplus enhanced with additional kind codes for German
                  patents
 NEWS 34  MAY 22  CA/CAplus enhanced with IPC reclassification in Japanese
                  patents

 NEWS EXPRESS  NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS LOGIN    Welcome Banner and News Items
 NEWS IPC8     For general information regarding STN implementation of IPC 8
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Enter NEWS followed by the item number or name to see news on that
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FILE 'HOME' ENTERED AT 15:04:35 ON 11 JUN 2007

=> file medline, uspatful,
COST IN U.S. DOLLARS                                 SINCE FILE      TOTAL
                                                          ENTRY    SESSION
FULL ESTIMATED COST                                        1.26       1.26

FILE 'MEDLINE' ENTERED AT 15:07:59 ON 11 JUN 2007

FILE 'USPATFULL' ENTERED AT 15:07:59 ON 11 JUN 2007
CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

=> s macrolide biosynthesis
L1           33 MACROLIDE BIOSYNTHESIS

=> s spiramycin biosynthesis
L2           12 SPIRAMYCIN BIOSYNTHESIS

=> d l2 ti abs ibib tot

L2   ANSWER 1 OF 12     MEDLINE on STN
TI   Excisable cassettes: new tools for functional analysis of Streptomyces
     genomes.
AB   The functional analysis of microbial genomes often requires gene
     inactivation.  We constructed a set of cassettes consisting of single
     antibiotic resistance genes flanked by the attL and attR sites resulting
     from site-specific integration of the Streptomyces pSAM2 element.  These
     cassettes can easily be used to inactivate genes by in-frame deletion in
     Streptomyces by a three-step strategy.  In the first step, in Escherichia
     coli, the cassette is inserted into a cloned copy of the gene to be
     inactivated.  In the second step, the gene is replaced by homologous
     recombination in Streptomyces, allowing substitution of the wild-type
     target gene with its inactivated counterpart.  In the third step, the
     cassette can be removed by expression of the pSAM2 genes xis and int.  The
     resulting strains are marker-free and contain an "attB-like" sequence of
     33, 34, or 35 bp with no stop codon if the cassette is correctly chosen.
     Thus, a gene can be disrupted by creating an in-frame deletion, avoiding
     polar effects if downstream genes are cotranscribed with the target gene.
     A set of cassettes was constructed to contain a hygromycin or gentamicin
     resistance gene flanked by the attL and attR sites.  The initial
     constructions carrying convenient cloning sites allow the insertion of any
     other marker gene.  We tested insertion and excision by inserting a
     cassette into orf3, the third gene of an operon involved in
     spiramycin biosynthesis.  We verified that the cassette
     exerted a polar effect on the transcription of downstream genes but that,
     after excision, complementation with orf3 alone restored spiramycin
     production.
ACCESSION NUMBER:    2006400638     MEDLINE
DOCUMENT NUMBER:     PubMed ID: 16820478
TITLE:               Excisable cassettes: new tools for functional analysis of
                     Streptomyces genomes.
AUTHOR:              Raynal Alain; Karray Fatma; Tuphile Karine; Darbon-Rongere
                     Emmanuelle; Pernodet Jean-Luc
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CORPORATE SOURCE:    Laboratoire Microbiologie Moleculaire des Actinomycetes,
                     Institut de Genetique et Microbiologie, UMR CNRS 8621, Bat.
                     400, Universite Paris-Sud, F-91405 Orsay, France..
                     alain.raynal@igmors.u-psud.fr
SOURCE:              Applied and environmental microbiology, (2006 Jul) Vol. 72,
                     No. 7, pp. 4839-44.
                     Journal code: 7605801. ISSN: 0099-2240.
PUB. COUNTRY:        United States
DOCUMENT TYPE:       (EVALUATION STUDIES)
                     Journal; Article; (JOURNAL ARTICLE)
                     (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
OTHER SOURCE:        GENBANK-AM238621; GENBANK-AM238622; GENBANK-AM238623;
                     GENBANK-AM238624; GENBANK-AM238625; GENBANK-AM238626;
                     GENBANK-AM238627; GENBANK-AM238628; GENBANK-AM238629;
                     GENBANK-AM238630; GENBANK-AM238631; GENBANK-AM238632
ENTRY MONTH:         200609
ENTRY DATE:          Entered STN: 6 Jul 2006
                     Last Updated on STN: 6 Sep 2006
                     Entered Medline: 5 Sep 2006

L2   ANSWER 2 OF 12     MEDLINE on STN
TI   LC-ESI/MS identification and reduction of impurities in spiramycin
     fermentation.
AB   There are several impurities in the spiramycin fermentation broth which
     leads to a lower yield and lower quality of the product.  Four impurities
     in spiramycin broth have been simultaneously separated and identified by
     LC-ESI/MS.  The generation of these impurities was attributed to the
     fluctuation of glucosylation in spiramycin biosynthesis
     .  Nitrogen sources, ammonium in particular, were found to play an
     important role at the glucosylation.  Aided with the information of
     LC-ESI/MS analysis and subsequent optimization of the culture medium,
     better culture medium of shake flask was designed, which leads to
     reduction of impurities by 22% - 88%.
ACCESSION NUMBER:    2005359692     IN-PROCESS
DOCUMENT NUMBER:     PubMed ID: 16013489
TITLE:               LC-ESI/MS identification and reduction of impurities in
                     spiramycin fermentation.
AUTHOR:              Li You-Yuan; Chen Chang-Hua; Gu Yi-Feng; Li Xiao-Yong
CORPORATE SOURCE:    ECUST State Key Laboratory of Bioreactor Engineering,
                     Shanghai 200237, China.. leeyy@china.com.cn
SOURCE:              Sheng wu gong cheng xue bao = Chinese journal of
                     biotechnology, (2005 Mar) Vol. 21, No. 2, pp. 275-8.
                     Journal code: 9426463. ISSN: 1000-3061.
PUB. COUNTRY:        China
DOCUMENT TYPE:       (ENGLISH ABSTRACT)
                     Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            Chinese
FILE SEGMENT:        NONMEDLINE; IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE:          Entered STN: 15 Jul 2005
                     Last Updated on STN: 15 Dec 2005

L2   ANSWER 3 OF 12     MEDLINE on STN
TI   Modulation of lipid metabolism and spiramycin
     biosynthesis in Streptomyces ambofaciens unstable mutants.
AB   Streptomyces ambofaciens is prone to genetic instability involving genomic
     rearrangements at the extremities of the chromosomal DNA.  An amplified
     DNA sequence (ADS205), including an open reading frame (orfPS), is
     responsible for the reversible loss of spiramycin production in the mutant
     strain NSA205 (ADS205(+) Spi-).  The product of orfPS is homologous to
     polyketide synthase systems (PKSs) involved in the biosynthesis of
     erythromycin and rapamycin and is overexpressed in strain NSA205 compared
     with the parental strain RP181110.  As PKSs and fatty acid synthase
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systems have the same precursors, we tested the possibility that overexpression of orfPS also affects lipid metabolism in strain NSA205. This report focuses on comparative analysis of lipids in strain RP181110, the mutant strain NSA205, and a derivative, NSA228 (ADS205(-) Spi+). NSA205 showed a dramatically depressed lipid content consisting predominantly of phospholipids and triacylglycerols. This lipid content was globally restored in strain NSA228, which had lost ADS205. Furthermore, strains RP181110 and NSA205 presented similar phospholipid and triacylglycerol compositions. No abnormal fatty acids were detected in NSA205.

ACCESSION NUMBER: 1999278097 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10347068
TITLE: Modulation of lipid metabolism and spiramycin biosynthesis in Streptomyces ambofaciens unstable mutants.
AUTHOR: Schauner C; Dary A; Lebrihi A; Leblond P; Decaris B; Germain P
CORPORATE SOURCE: Laboratoire de Fermentations et de Bioconversions Industrielles, ENSAIA, Institut National Polytechnique de Lorraine, Vandoeuvre-les-Nancy, France.
SOURCE: Applied and environmental microbiology, (1999 Jun) Vol. 65, No. 6, pp. 2730-7.
Journal code: 7605801. ISSN: 0099-2240.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199909
ENTRY DATE: Entered STN: 25 Sep 1999
Last Updated on STN: 25 Sep 1999
Entered Medline: 8 Sep 1999

L2 ANSWER 4 OF 12 MEDLINE on STN
TI Regulation of spiramycin synthesis in Streptomyces ambofaciens: effects of glucose and inorganic phosphate.
AB The production of the 16-membered macrolide antibiotic, spiramycin, in Streptomyces ambofaciens is inhibited by glucose, 2-deoxyglucose and inorganic phosphate. The role of intracellular ATP content and phosphorylated metabolites as common regulating signals of both glucose and phosphate inhibitory effects is discussed. Two enzymatic targets of the effect of phosphate on spiramycin biosynthesis were studied. Valine dehydrogenase, the first enzyme of valine catabolism (supplier of aglycone spiramycin precursors), and alkaline phosphatase, which cleaves phosphorylated intermediates, were repressed in the presence of excess phosphate.
ACCESSION NUMBER: 97077626 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8920193
TITLE: Regulation of spiramycin synthesis in Streptomyces ambofaciens: effects of glucose and inorganic phosphate.
AUTHOR: Lounes A; Lebrihi A; Benslimane C; Lefebvre G; Germain P
CORPORATE SOURCE: Laboratoire de Microbiologie Industrielle et Alimentaire, ENSAIA, Institut National Polytechnique de Lorraine, Vandoeuvre, France.
SOURCE: Applied microbiology and biotechnology, (1996 Mar) Vol. 45, No. 1-2, pp. 204-11.
Journal code: 8406612. ISSN: 0175-7598.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Biotechnology
ENTRY MONTH: 199701
ENTRY DATE: Entered STN: 28 Jan 1997

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                         Last Updated on STN: 28 Jan 1997
                         Entered Medline: 2 Jan 1997

L2    ANSWER 5 OF 12     MEDLINE on STN
TI    An amplifiable and deletable locus of Streptomyces ambofaciens RP181110
      contains a very large gene homologous to polyketide synthase genes.
AB    Streptomyces ambofaciens RP181110 produces the macrolide polyketide
      spiramycin.  Like many other Streptomyces species, the RP181110 strain is
      prone to genetic instability involving genomic rearrangements (deletions
      and/or amplifications) in the large unstable region of the genome.  It has
      previously been demonstrated that the amplification of a particular locus
      (AUD205) affects spiramycin biosynthesis and,
      conversely, the loss of this amplification is correlated with the
      restoration of antibiotic production.  This report focuses on a 0.93 kb
      reiterated fragment specific for the AUD205 locus.  Sequencing of 3596 bp
      including this reiteration revealed the presence of an ORF (orfPS) whose
      potential product was highly homologous to the EryA and Raps proteins,
      responsible for the biosynthesis of erythromycin in Saccharopolyspora
      erythraea and rapamycin in Streptomyces hygroscopicus, respectively. orfPS
      encodes a protein with at least four successive domains: ketoacyl
      synthase, acyltransferase, ketoreductase and acyl carrier protein.  This
      organization is very similar to most eryA and rap modules.  The reiterated
      sequence corresponds to the acyltransferase domain. orfPS was transcribed
      during rapid growth and stationary phase in RP181110 and overtranscribed
      in the amplified mutant.  Both these results suggest that the gene encodes
      a type I polyketide synthase and its reorganization is responsible for the
      loss of spiramycin production in the amplified strains.
ACCESSION NUMBER:    97039851     MEDLINE
DOCUMENT NUMBER:     PubMed ID: 8885397
TITLE:               An amplifiable and deletable locus of Streptomyces
                     ambofaciens RP181110 contains a very large gene homologous
                     to polyketide synthase genes.
AUTHOR:              Aigle B; Schneider D; Morilhat C; Vandewiele D; Dary A;
                     Holl A C; Simonet J M; Decaris B
CORPORATE SOURCE:    Laboratoire de Genetique et Microbiologie, Faculte des
                     Sciences, Universite Henri Poincare, Vandoeuvre-les-Nancy,
                     France.
SOURCE:              Microbiology (Reading, England), (1996 Oct) Vol. 142 ( Pt
                     10), pp. 2815-24.
                     Journal code: 9430468. ISSN: 1350-0872.
PUB. COUNTRY:        ENGLAND: United Kingdom
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
                     (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
OTHER SOURCE:        GENBANK-Z46913
ENTRY MONTH:         199701
ENTRY DATE:          Entered STN: 19 Feb 1997
                     Last Updated on STN: 19 Feb 1997
                     Entered Medline: 23 Jan 1997

L2    ANSWER 6 OF 12     MEDLINE on STN
TI    Regulation of valine catabolism by ammonium in Streptomyces ambofaciens,
      producer of spiramycin.
AB    In Streptomyces ambofaciens, valine favored spiramycin
      biosynthesis by supplying aglycone precursors.  The kinetics of
      valine consumption and isobutyrate production showed that isobutyrate
      accumulated in the cell during the growth phase, was excreted in the
      stationary phase, and then was reassimilated during spiramycin production.
      When valine was in excess, its deamination led to high ammonium excretion
      and to a significant drop in spiramycin production.  We demonstrated that
      ammonium ions were the cause of the negative effect.  Addition of a
      chelator agent, Ca3(PO4)2, improved spiramycin production by sixfold.  In
      contrast, addition of ammonium, between 0 and 48 h, severely reduced
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     spiramycin production.  The negative effect of ammonium was reversed by
     addition of a catabolic intermediate of valine, isobutyrate.  In addition
     to stimulating the specific growth rate, ammonium ions slowed down valine
     catabolism: the specific valine uptake rate, excretion, and reassimilation
     of isobutyrate were lowered by the pulse of ammonium.  Our study showed
     that in addition to valine dehydrogenase, which provided the nitrogen
     necessary to the cell, ammonium ions repressed ketoisovalerate
     dehydrogenase, which introduced valine as carbon, energy, and aglycone
     precursor sources.  However, valine dehydrogenase and ketoisovalerate
     dehydrogenase did not constitute the principal enzymatic targets of the
     negative effect of ammonium in spiramycin production.
ACCESSION NUMBER:    96086644    MEDLINE
DOCUMENT NUMBER:     PubMed ID: 7585357
TITLE:               Regulation of valine catabolism by ammonium in Streptomyces
                     ambofaciens, producer of spiramycin.
AUTHOR:              Lounes A; Lebrihi A; Benslimane C; Lefebvre G; Germain P
CORPORATE SOURCE:    Laboratoire de microbiologie industrielle et alimentaire,
                     ENSAIA, Institut national polytechnique de Lorraine,
                     Vandoeuvre, France.
SOURCE:              Canadian journal of microbiology, (1995 Sep) Vol. 41, No.
                     9, pp. 800-8.
                     Journal code: 0372707. ISSN: 0008-4166.
PUB. COUNTRY:        Canada
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
ENTRY MONTH:         199512
ENTRY DATE:          Entered STN: 24 Jan 1996
                     Last Updated on STN: 6 Feb 1998
                     Entered Medline: 13 Dec 1995

L2   ANSWER 7 OF 12     MEDLINE on STN
TI   Relationship between valine, fatty acids, and spiramycin
     biosynthesis in Streptomyces ambofaciens.
AB   Spiramycin biosynthesis in Streptomyces ambofaciens
     was stimulated in the presence of valine or by sequential addition of some
     short-chain fatty acids to a culture medium containing an ammonium salt as
     source of nitrogen.  Acetate kinase and acetyl-CoA carboxylase, enzymes
     that catalysed the formation of precursors of spiramycin
     biosynthesis (acetyl-CoA and malonyl-CoA), were detected during
     the active growth and antibiotic production phases.  In this latter phase
     a higher level of acetyl-CoA carboxylase activity was observed with valine
     (1.02 mumol.min-1.mg protein-1) than with ammonium (0.05 mumol.min-1.mg
     protein-1) as nitrogen source, while the evolution and the level of
     acetate kinase activity were the same in both media.  Successive addition
     of acetate and isobutyrate stimulated highly and weakly the acetyl-CoA
     carboxylase and acetate kinase activity, respectively.
ACCESSION NUMBER:    95007254    MEDLINE
DOCUMENT NUMBER:     PubMed ID: 7922889
TITLE:               Relationship between valine, fatty acids, and
                     spiramycin biosynthesis in Streptomyces
                     ambofaciens.
AUTHOR:              Laakel M; Lebrihi A; Khaoua S; Schneider F; Lefebvre G;
                     Germain P
CORPORATE SOURCE:    Laboratoire de microbiologie industrielle, ENSAIA, Institut
                     national polytechnique de Lorraine, Vandoeuvre, France.
SOURCE:              Canadian journal of microbiology, (1994 Aug) Vol. 40, No.
                     8, pp. 672-6.
                     Journal code: 0372707. ISSN: 0008-4166.
PUB. COUNTRY:        Canada
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
ENTRY MONTH:         199411
ENTRY DATE:         Entered STN: 22 Dec 1994
                    Last Updated on STN: 3 Feb 1997
                    Entered Medline: 7 Nov 1994

L2   ANSWER 8 OF 12     MEDLINE on STN
TI   Physiology and genetics of antibiotic production and resistance.
AB   Actinomycetes have the genetic capability to synthesize many different
     biologically active secondary metabolites and of these compounds,
     antibiotics predominate in therapeutic and commercial importance.
     Intensive research often centres on the use of molecular techniques to
     investigate the physiology and genetics of antibiotic biosynthesis with a
     view to improving production.  The isolation of clones of Streptomyces
     hygroscopicus, the producer of geldanamycin, which synthesizes
     geldanamycin in S. lividans, is reported.  Molecular approaches using
     genes for elongation factors (tuf) were used in attempts to increase the
     fermentation yield of kirromycin, whilst probes for aphD and sph, genes
     for streptomycin phosphotransferases, were used to gather information on
     streptomycin genes in soil.  Actinomycete populations in soil and
     earthworms may help in developing a strategy for discovering additional
     antimicrobials in soil.  The relationship of proline metabolism to the
     secondary metabolite undecylprodigiosin and the carbon regulation of
     spiramycin biosynthesis in S. ambofaciens is also
     reported.
ACCESSION NUMBER:   94188572     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 8140285
TITLE:              Physiology and genetics of antibiotic production and
                    resistance.
AUTHOR:             Alderson G; Ritchie D A; Cappellano C; Cool R H; Ivanova N
                    M; Huddleston A S; Flaxman C S; Kristufek V; Lounes A
CORPORATE SOURCE:   Department of Biomedical Sciences, University of Bradford,
                    West Yorkshire, UK.
SOURCE:             Research in microbiology, (1993 Oct) Vol. 144, No. 8, pp.
                    665-72.  Ref: 25
                    Journal code: 8907468. ISSN: 0923-2508.
PUB. COUNTRY:       France
DOCUMENT TYPE:      (IN VITRO)
                    Journal; Article; (JOURNAL ARTICLE)
                    General Review; (REVIEW)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals
ENTRY MONTH:        199404
ENTRY DATE:         Entered STN: 9 May 1994
                    Last Updated on STN: 6 Feb 1998
                    Entered Medline: 22 Apr 1994

L2   ANSWER 9 OF 12     MEDLINE on STN
TI   Effect of ammonium ions on spiramycin biosynthesis in
     Streptomyces ambofaciens.
AB   The effect of ammonium on growth and spiramycin
     biosynthesis in Streptomyces ambofaciens cultured on a chemically
     defined medium was studied.  Spiramycin biosynthesis
     was better in the presence of valine and isoleucine than in the presence
     of ammonium.  This production was reduced in the presence of excess
     ammonium (100 mM).  The addition of catabolic intermediates of valine and
     isoleucine reserved the negative effect of ammonium.  Valine dehydrogenase
     (VDH), the enzyme responsible for valine, leucine and isoleucine
     catabolism, was repressed when excess ammonium was present in the medium.
     This repression was approximately 25% when the ammonium concentration was
     increased from 50 to 100 mM.  In addition to the repression of VDH
     biosynthesis, ammonium inhibited the activity of this enzyme.  This
     inhibition was 45 and 65% in the presence of 50 and 100 mM ammonium,
     respectively.
ACCESSION NUMBER:   93040098     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 1368912
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TITLE:              Effect of ammonium ions on spiramycin
                    biosynthesis in Streptomyces ambofaciens.
AUTHOR:             Lebrihi A; Lamsaif D; Lefebvre G; Germain P
CORPORATE SOURCE:   Laboratoire de Microbiologie Industrielle, ENSAIA, Institut
                    National Polytechnique de Lorraine, Vandoeuvre, France.
SOURCE:             Applied microbiology and biotechnology, (1992 Jun) Vol. 37,
                    No. 3, pp. 382-7.
                    Journal code: 8406612. ISSN: 0175-7598.
PUB. COUNTRY:       GERMANY: Germany, Federal Republic of
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Biotechnology
ENTRY MONTH:        199212
ENTRY DATE:         Entered STN: 9 Aug 1995
                    Last Updated on STN: 3 Feb 1997
                    Entered Medline: 1 Dec 1992

L2   ANSWER 10 OF 12     MEDLINE on STN
TI   Cloning of spiramycin biosynthetic genes and their use in constructing
     Streptomyces ambofaciens mutants defective in spiramycin
     biosynthesis.
AB   Several cosmid clones from Streptomyces ambofaciens containing the
     spiramycin resistance gene srmB were introduced into S. fradiae PM73, a
     mutant defective in tylosin synthesis, resulting in tylosin synthesis.
     The DNA responsible for this complementation was localized to a
     10.5-kilobase EcoRI fragment.  A 32-kilobase DNA segment which included
     the srmB spiramycin resistance gene and DNA which complemented the defect
     in strain PM73 were mutagenized in vivo with Tn10 carrying the gene for
     Nmr (which is expressed in Streptomyces spp.) or in vitro by insertional
     mutagenesis with a drug resistance gene (Nmr) cassette.  When these
     mutagenized DNA segments were crossed into the S. ambofaciens chromosome,
     three mutant classes blocked in spiramycin synthesis were obtained.  One
     mutant accumulated two precursors of spiramycin, platenolide I and
     platenolide II.  Two mutants, when cofermented with the
     platenolide-accumulating mutant, produced spiramycin.  Tylactone
     supplementation of these two mutants resulted in the synthesis of a group
     of compounds exhibiting antibiotic activity.  Two other mutants failed to
     coferment with any of the other mutants or to respond to tylactone
     supplementation.
ACCESSION NUMBER:   90299800    MEDLINE
DOCUMENT NUMBER:    PubMed ID: 2193916
TITLE:              Cloning of spiramycin biosynthetic genes and their use in
                    constructing Streptomyces ambofaciens mutants defective in
                    spiramycin biosynthesis.
AUTHOR:             Richardson M A; Kuhstoss S; Huber M L; Ford L; Godfrey O;
                    Turner J R; Rao R N
CORPORATE SOURCE:   Lilly Research Laboratories, Division of Eli Lilly and
                    Company, Indianapolis, Indiana 46285.
SOURCE:             Journal of bacteriology, (1990 Jul) Vol. 172, No. 7, pp.
                    3790-8.
                    Journal code: 2985120R. ISSN: 0021-9193.
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals
ENTRY MONTH:        199008
ENTRY DATE:         Entered STN: 7 Sep 1990
                    Last Updated on STN: 3 Feb 1997
                    Entered Medline: 7 Aug 1990

L2   ANSWER 11 OF 12     MEDLINE on STN
TI   Genetic and biochemical features of spiramycin
     biosynthesis in Streptomyces ambofaciens--curing, protoplast
     regeneration and plasmid transfer.
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AB Spiramycin-producing Streptomyces ambofaciens KA-1028 harboring the pSA1 plasmid gave rise to spiramycin non-producing variants at high frequencies by various curing treatments. However, a number of the spiramycin non-producing progeny obtained by treatment with acridine dyes, still harbored plasmid DNAs which could not be differentiated from plasmid pSA1 by contour length, cleavage patterns and heteroduplex analysis. By treatment with mitomycin C, plasmid pSA1 was cured at high efficiency and spiramycin non-producing strains were obtained. Strain U-1717R obtained by regeneration of protoplasts of plasmid-cured strain U-1717 regained spiramycin production on growth on solid medium only. Furthermore, transconjugants obtained by mating between strain KA-1028 and U-1717R-24 (streptomycin-resistant) regained spiramycin production in both liquid and solid media. We conclude that the genes for the biosynthesis of spiramycin are encoded in a replicon other than plasmid pSA1 but that this plasmid plays a role in the regulation of spiramycin production.

ACCESSION NUMBER: 82238990 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7096204
TITLE: Genetic and biochemical features of spiramycin biosynthesis in Streptomyces ambofaciens--curing, protoplast regeneration and plasmid transfer.
AUTHOR: Ikeda H; Tanaka H; Omura S
SOURCE: The Journal of antibiotics, (1982 Apr) Vol. 35, No. 4, pp. 507-16.
Journal code: 0151115. ISSN: 0021-8820.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198209
ENTRY DATE: Entered STN: 17 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 10 Sep 1982

L2 ANSWER 12 OF 12 USPATFULL on STN
TI Polypeptides involved in the biosynthesis of spiramycins, nucleotide sequences encoding these polypeptides and applications thereof
AB The present invention relates to the isolation and identification of novel genes of the biosynthetic pathway for spiramycins and to novel polypeptides involved in this biosynthesis. The invention also relates to a method for producing these polypeptides. It also relates to the use of these genes for the purpose of increasing the levels of production and the purity of the spiramycin produced. The invention relates in particular to a microorganism which produces spiramycin I but which does not produce spiramycin II and III, and to the use of such a microorganism. The invention also relates to the use of the genes of the biosynthetic pathway for spiramycins for constructing mutants which can lead to the synthesis of novel antibiotics or to derived forms of spiramycins. The invention also relates to the molecules produced through the expression of these genes and to pharmacologically active compositions of a molecule produced through the expression of such genes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2005:233591 USPATFULL
TITLE: Polypeptides involved in the biosynthesis of spiramycins, nucleotide sequences encoding these polypeptides and applications thereof
INVENTOR(S): Blondelet-Rouault, Marie-Helene, Orsay, FRANCE
Dominguez, Helene, Avignon, FRANCE
Darbon-Rongere, Emmanuelle, Voisins Le Bretonneux, FRANCE
Gerbaud, Claude, Gagny, FRANCE
Gondran, Anne, Paris, FRANCE
Karray, Fatma, Bures Sur Yvette, FRANCE

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                        Lacroix, Patricia, Le Perreux, FRANCE
                        Oestreicher-Mermet-Bouvier, Nathalie, Clamart, FRANCE
                        Pernodet, Jean-Luc, Cachan, FRANCE
                        Tuphile, Karine, Caluire, FRANCE
PATENT ASSIGNEE(S):     Aventis Pharma S.A., Antony, FRANCE (non-U.S.
                        corporation)

                             NUMBER        KIND    DATE
                        --------------- ------ --------
PATENT INFORMATION:     US 2005202528      A1    20050915
APPLICATION INFO.:      US 2003-680860     A1    20031007  (10)

                               NUMBER        DATE
                        ---------------- --------
PRIORITY INFORMATION:   FR 2002-12489       20021008
                        FR 2003-2439        20030227
                        US 2003-493490P     20030807 (60)
DOCUMENT TYPE:          Utility
FILE SEGMENT:           APPLICATION
LEGAL REPRESENTATIVE:   ROSS J. OEHLER, AVENTIS PHARMACEUTICALS INC., ROUTE
                        202-206, MAIL CODE: D303A, BRIDGEWATER, NJ, 08807, US
NUMBER OF CLAIMS:       93
EXEMPLARY CLAIM:        1
NUMBER OF DRAWINGS:     41 Drawing Page(s)
LINE COUNT:             15244
CAS INDEXING IS AVAILABLE FOR THIS PATENT.


=> d his

     (FILE 'HOME' ENTERED AT 15:04:35 ON 11 JUN 2007)

     FILE 'MEDLINE, USPATFULL' ENTERED AT 15:07:59 ON 11 JUN 2007
L1             33 S MACROLIDE BIOSYNTHESIS
L2             12 S SPIRAMYCIN BIOSYNTHESIS

=> s streptomyces ambofaciens
L3           290 STREPTOMYCES AMBOFACIENS

=> s l3 and (DNA)
L4           226 L3 AND (DNA)

=> s l4 and (encoded protein)
L5            17 L4 AND (ENCODED PROTEIN)

=> s l5 and l2
L6             1 L5 AND L2

=> d l6 ti abs ibib tot

L6   ANSWER 1 OF 1  USPATFULL on STN
TI     Polypeptides involved in the biosynthesis of spiramycins, nucleotide
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       and the purity of the spiramycin produced. The invention relates in
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       spiramycins. The invention also relates to the molecules produced
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       compositions of a molecule produced through the expression of such
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TITLE:                   Polypeptides involved in the biosynthesis of
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                         Oestreicher-Mermet-Bouvier, Nathalie, Clamart, FRANCE
                         Pernodet, Jean-Luc, Cachan, FRANCE
                         Tuphile, Karine, Caluire, FRANCE
PATENT ASSIGNEE(S):      Aventis Pharma S.A., Antony, FRANCE (non-U.S.
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